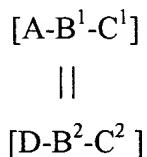


The listing of claims will replace all prior versions, and listings, of claims in the application. Please amend claims 25-29 and 38-43, 45, and 47-49 as follows.

**Listing of Claims:**

Claims 1-24. (Cancelled).

Claim 25. (Currently Amended) An empty ~~polyspecific~~ MHC complex comprising an sc-MHC class II molecule comprising linked in sequence an MHC  $\beta$  chain-peptide linker-MHC  $\alpha$  chain, the MHC molecule having the general formula:



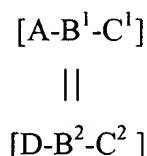
wherein,

- a) A represents at least one empty sc-MHC class II molecule,
- b) B<sub>1</sub>, B<sub>2</sub> are each independently a joining molecule,
- c) C<sub>1</sub>, C<sub>2</sub> are each independently an effector molecule or -H, wherein the effector molecules are each selected from the group consisting of a cell toxin other than ricin or diphtheria toxin, a chemotherapeutic drug, a radionuclide, a protein tag, a hormone, a fluor, an enzyme, an enzyme substrate, a cofactor, an enzyme inhibitor, a ligand, a hapten, biotin, a carbohydrate, and a fatty acid, and
- d) D represents at least one ~~empty sc-MHC class II molecule~~, ligand binding molecule or -H.

Claim 26. (Currently Amended) A **polyspecific** MHC complex comprising an empty sc-MHC class II molecule comprising a peptide binding groove, the complex being represented by the formulae A-B-C, B-A-C, or A-C-B, wherein A is at least one sc-MHC class II molecule, B is a joining molecule, C is an effector molecule or -H, and the effector molecule is selected from the group consisting of a cell toxin other than ricin or diphtheria toxin, a chemotherapeutic drug, a radionuclide, a protein tag, a hormone, a fluor, an enzyme, an enzyme substrate, a cofactor, an enzyme inhibitor, a ligand, a hapten, biotin, a carbohydrate, and a fatty acid, provided that the effector molecule is not an MHC class II molecule, and provided that when the complex is represented by A-C-B, -C- is not -H.

Claim 27. (Currently Amended) A loaded **polyspecific** MHC complex formed by contacting the **polyspecific** MHC complexes of claim 25 or 26 with a presenting peptide under conditions which form a specific binding complex between the presenting peptide and at least one of the empty sc-MHC class II molecules.

Claim 28. (Currently Amended) A **polyspecific** MHC complex fusion molecule comprising an sc-MHC molecule with peptide binding groove, the MHC molecule comprising linked in sequence an MHC  $\beta$  chain-peptide linker-MHC  $\alpha$  chain, the complex being represented by the following formula:



wherein,

- a) A represents at least one empty sc-MHC class II molecule comprising a recombinantly fused presenting peptide,
- b) B<sub>1</sub>, B<sub>2</sub> are each independently a joining molecule,

- c) C1, C2 are each independently an effector molecule or -H, wherein the effector molecules are each selected from the group consisting of a cell toxin other than ricin or diphtheria toxin, a chemotherapeutic drug, a radionuclide, a protein tag, a hormone, a fluor, an enzyme, an enzyme substrate, a cofactor, an enzyme inhibitor, a ligand, a hapten, biotin, a carbohydrate, and a fatty acid, and
- d) D represents at least one ~~empty~~ sc MHC class II molecule, ligand binding molecule or -H.

Claim 29. (Currently Amended) A **polyspecific** MHC fusion molecule comprising a sc-MHC class II molecule comprising a peptide binding groove, the complex being represented by the formulae: A-B-C , B-A-C, or A-C-B , wherein A is at least one sc-MHC class II molecule comprising a recombinantly fused presenting peptide, B is a joining molecule, C is an effector molecule or -H, and the effector molecule is selected from the group consisting of a cell toxin other than ricin or diphtheria toxin, a chemotherapeutic drug, a radionuclide, a protein tag, a hormone, a fluor, an enzyme, an enzyme substrate, a cofactor, an enzyme inhibitor, a ligand, a hapten, biotin, a carbohydrate, and a fatty acid, provided that the effector molecule is not an MHC class II molecule, and provided that when the complex is represented by the formulae: A-C-B, -C- is not H.

Claims 30-37. (Cancelled).

Claim 38. (Currently Amended) The **polyspecific** MHC complex of any of claims 25, 26, 28, or 29, wherein the **polyspecific** MHC complex comprises the complex in Figure 9B.

Claim 39. (Currently Amended) The **polyspecific** MHC complex of any of claims 25 or 28, wherein the joining molecules are each selected from the group consisting of a helix-turn-helix motif and a dendrimer particle.

Claim 40. (Currently Amended) The **polyspecific** MHC complex of any of claims 26 or 29, wherein the joining molecule is selected from the group consisting of a helix-turn-helix motif and a dendrimer particle.

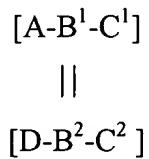
Claim 41. (Currently Amended) The **polyspecific** MHC complex of any of claims 25 or 28, wherein the ligand binding molecule is selected from the group consisting of an immunoglobulin, a single-chain antibody, an Fv, and a receptor ligand.

Claim 42. (Currently Amended) The **polyspecific** MHC complex of claim 41, wherein the immunoglobulin, single-chain antibody, or Fv is capable of binding a cell surface target selected from the group consisting of CD2, CD3, CD4, CD8, CD28, CD40, CD45, CTLA4, and Fas.

Claim 43. (Currently Amended) The **polyspecific** MHC complex of claim 41, wherein the receptor ligand is selected from the group consisting of FasL, CD80, and CD86.

Claim 44. (Cancelled)

Claim 45. (Currently Amended) An empty **polyspecific** MHC complex comprising an sc-MHC class II molecule comprising linked in sequence an MHC  $\beta$  chain-peptide linker-MHC  $\alpha$  chain, the MHC molecule having the general formula:



wherein,

- a) A represents at least one empty sc-MHC class II molecule,
- b) B<sub>1</sub>, B<sub>2</sub> are each independently a joining molecule,
- c) C<sub>1</sub>, C<sub>2</sub> are each independently an effector molecule or -H, and

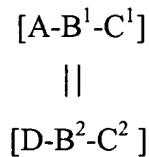
d) D represents at least one ~~empty sc-MHC class II molecule~~, ligand binding molecule or -H,

wherein each effector molecule is a protein tag, and wherein the protein tags are each selected from the group consisting of 6xHIS, EE epitope, and myc epitope.

Claim 46. (Cancelled)

Claim 47. (Currently Amended) A polyspecific MHC complex comprising an empty sc-MHC class II molecule comprising a peptide binding groove, the complex being represented by the formulae A-B-C, B-A-C, or A-C-B, wherein A is at least one sc-MHC class II molecule, B is a joining molecule and C is an effector molecule or -H, provided that when the complex is represented by A-C-B, -C- is not -H, wherein the effector molecule is a protein tag, and wherein the protein tag is selected from the group consisting of 6xHIS, EE epitope, and myc epitope.

Claim 48. (Currently Amended) A polyspecific MHC complex fusion molecule comprising an sc-MHC molecule with peptide binding groove, the MHC molecule comprising linked in sequence an MHC  $\beta$  chain-peptide linker-MHC  $\alpha$  chain, the complex being represented by the following formula:



wherein,

- a) A represents at least one empty sc-MHC class II molecule comprising a recombinantly fused presenting peptide,
- b) B<sub>1</sub>, B<sub>2</sub> are each independently a joining molecule,
- c) C<sub>1</sub>, C<sub>2</sub> are each independently an effector molecule or -H, and
- d) D represents at least one ~~empty sc-MHC class II molecule~~, ligand binding molecule or -H,

wherein each effector molecule is a protein tag, and wherein the protein tags are each selected from the group consisting of 6xHIS, EE epitope, and myc epitope.

Claim 49. (Currently Amended) A polyspecific MHC fusion molecule comprising a sc-MHC class II molecule comprising a peptide binding groove, the complex being represented by the formulae: A-B-C , B-A-C, or A-C-B , wherein A is at least one sc-MHC class II molecule comprising a recombinantly fused presenting peptide, B is a joining molecule and C is an effector molecule or -H, provided that when the complex is represented by the formulae: A-C-B, -C- is not H, wherein the effector molecule is a protein tag, and wherein the protein tag is selected from the group consisting of 6xHIS, EE epitope, and myc epitope.